ELSEVIER

Chemical Physics 194 (1995) 460–464

Chemical Physics

Author index to volume 194

Aartsma, T.J., see Kennis, J.T.M. 194 (1995) 285
Aartsma, T.J., see Schelvis, J.P.M. 194 (1995) 303
Aboab, B., see Botrel, A. 194 (1995) 101
Ågren, H., see Minaev, B.F. 194 (1995) 19
Amesz, J., see Kennis, J.T.M. 194 (1995) 285
Andersson, B., see Pålsson, L.-O. 194 (1995) 291
Andréasson, L.-E., see Käß, H. 194 (1995) 419
Andrews, S.R., F.M. Harris and D.E. Parry, Double ionization of the propyne molecule to ground and electronically excited states of the doubly charged ion 194 (1995) 215
Andrianambinintsoa, S., see Nabedryk, E. 194 (1995) 371
Angerhofer, A., F. Bornhäuser, A. Gall and R.J. Cogdell, Optical and optically detected magnetic resonance investigation on purple photosynthetic bacterial antenna complexes 194 (1995) 259

Barber, J., see Klug, D.R. 194 (1995) 433
Barvík, I., see Warns, Ch. 194 (1995) 117
Benderskii, V.A., S.Yu. Grebenshchikov and G.V. Mil'nikov, Tunneling splittings in model 2D potentials. II. $V(X, Y) = \lambda(X^2 - X_0^2)^2 - CX^2(Y - Y_0) + \frac{1}{2}\Omega^2(Y - Y_0 + CX_0^2/\Omega^2)^2 - C^2X_0^4/2\Omega^2$ 194 (1995) 1
Bertagnolli, H., see Crüsemann, R. 194 (1995) 81
Bittersmann-Weidlich, E., see Käß, H. 194 (1995) 419
Bittl, R., see Prisner, T.F. 194 (1995) 361
Bittner, T., G.P. Wiederrecht, K.-D. Irrgang, G. Renger and M.R. Wasielewski, Femtosecond transient absorption spectroscopy on the light-harvesting Chl a/b protein complex of Photosystem II at room temperature and 12 K 194 (1995) 311
Blankenship, R.E., see Savikhin, S. 194 (1995) 245
Bökman, F., see Crüsemann, R. 194 (1995) 81
Bönigk, B., see Käß, H. 194 (1995) 419
Bornhäuser, F., see Angerhofer, A. 194 (1995) 259
Boschetti, A., see Iannotta, S. 194 (1995) 133
Botrel, A., B. Aboab, F. Corre and F. Tonnard, A theoretical investigation of solvatochromism. Application to merocyanines similar to colored forms obtained by flash-photolysis of spiropyrans 194 (1995) 101
Boussac, A., Exchange of chloride by bromide in the manganese Photosystem-II complex studied by cw- and pulsed-EPR 194 (1995) 409
Bratt, P.J., see Kaminskaya, O. 194 (1995) 335
Breton, J., see Nabedryk, E. 194 (1995) 371
Brion, C.E., see Cooper, G. 194 (1995) 175
Briquez, S., A. Lakhlifi, S. Picaud and C. Girardet, Molecular adsorption on ionic substrates: characterization of terrace and step sites 194 (1995) 65

ELSEVIER

Chemical Physics 194 (1995) 460–464

Chemical Physics

Author index to volume 194

Aartsma, T.J., see Kennis, J.T.M. 194 (1995) 285
Aartsma, T.J., see Schelvis, J.P.M. 194 (1995) 303
Aboab, B., see Botrel, A. 194 (1995) 101
Ågren, H., see Minaev, B.F. 194 (1995) 19
Amesz, J., see Kennis, J.T.M. 194 (1995) 285
Andersson, B., see Pålsson, L.-O. 194 (1995) 291
Andréasson, L.-E., see Käß, H. 194 (1995) 419
Andrews, S.R., F.M. Harris and D.E. Parry, Double ionization of the propyne molecule to ground and electronically excited states of the doubly charged ion 194 (1995) 215
Andrianambinintsoa, S., see Nabedryk, E. 194 (1995) 371
Angerhofer, A., F. Bornhäuser, A. Gall and R.J. Cogdell, Optical and optically detected magnetic resonance investigation on purple photosynthetic bacterial antenna complexes 194 (1995) 259

Barber, J., see Klug, D.R. 194 (1995) 433
Barvík, I., see Warns, Ch. 194 (1995) 117
Benderskii, V.A., S.Yu. Grebenshchikov and G.V. Mil'nikov, Tunneling splittings in model 2D potentials. II. $V(X, Y) = \lambda(X^2 - X_0^2)^2 - CX^2(Y - Y_0) + \frac{1}{2}\Omega^2(Y - Y_0 + CX_0^2/\Omega^2)^2 - C^2X_0^4/2\Omega^2$ 194 (1995) 1
Bertagnolli, H., see Crüsemann, R. 194 (1995) 81
Bittersmann-Weidlich, E., see Käß, H. 194 (1995) 419
Bittl, R., see Prisner, T.F. 194 (1995) 361
Bittner, T., G.P. Wiederrecht, K.-D. Irrgang, G. Renger and M.R. Wasielewski, Femtosecond transient absorption spectroscopy on the light-harvesting Chl a/b protein complex of Photosystem II at room temperature and 12 K 194 (1995) 311
Blankenship, R.E., see Savikhin, S. 194 (1995) 245
Bökman, F., see Crüsemann, R. 194 (1995) 81
Bönigk, B., see Käß, H. 194 (1995) 419
Bornhäuser, F., see Angerhofer, A. 194 (1995) 259
Boschetti, A., see Iannotta, S. 194 (1995) 133
Botrel, A., B. Aboab, F. Corre and F. Tonnard, A theoretical investigation of solvatochromism. Application to merocyanines similar to colored forms obtained by flash-photolysis of spiropyrans 194 (1995) 101
Boussac, A., Exchange of chloride by bromide in the manganese Photosystem-II complex studied by cw- and pulsed-EPR 194 (1995) 409
Bratt, P.J., see Kaminskaya, O. 194 (1995) 335
Breton, J., see Nabedryk, E. 194 (1995) 371
Brion, C.E., see Cooper, G. 194 (1995) 175
Briquez, S., A. Lakhlifi, S. Picaud and C. Girardet, Molecular adsorption on ionic substrates: characterization of terrace and step sites 194 (1995) 65

Cacciatore, M., see Iannotta, S. 194 (1995) 133
Cagol, A., see Iannotta, S. 194 (1995) 133
Chang, H.-C., G.J. Small and R. Jankowiak, Temperature dependent hole burning of the 684 nm chlorophyll *a* of the isolated reaction center of Photosystem II: confirmation of the linker model 194 (1995) 323
Chynwat, V. and H.A. Frank, The application of the energy gap law to the S_1 energies and dynamics of carotenoids 194 (1995) 237
Cogdell, R.J., see Angerhofer, A. 194 (1995) 259
Cooper, G., T.N. Olney and C.E. Brion, Absolute UV and Soft X-ray photoabsorption of ethylene by high resolution dipole (e, e) spectroscopy 194 (1995) 175
Corre, F., see Botrel, A. 194 (1995) 101
Crüsemann, R., F. Bökman, V. Fritzsche and H. Bertagnolli, A multiple scattering EXAFS study of organometallic compounds: $W(CO)_6$ and (1,3,5-trimethylbenzene)$W(CO)_3$ 194 (1995) 81

Dejonghe, D., see Nabedryk, E. 194 (1995) 371
DeRose, V.J., M.J. Latimer, J.-L. Zimmermann, I. Mukerji, V.K. Yachandra, K. Sauer and M.P. Klein, Fluoride substitution in the Mn cluster from Photosystem II: EPR and X-ray absorption spectroscopy studies 194 (1995) 443
Dracheva, T.V., V.I. Novoderezhkin and A.P. Razjivin, Exciton theory of spectra and energy transfer in photosynthesis: spectral hole burning in the antenna of purple bacteria 194 (1995) 223
Durrant, J.R., see Klug, D.R. 194 (1995) 433

Evans, M.C.W., see Kaminskaya, O. 194 (1995) 335

Frank, H.A., see Chynwat, V. 194 (1995) 237
Freiberg, A., see Timpmann, K. 194 (1995) 275
Fritzsche, V., see Crüsemann, R. 194 (1995) 81

Gall, A., see Angerhofer, A. 194 (1995) 259
Gast, P., E.J. Lous and A.J. Hoff, Triplet–singlet difference spectra of *Rps. viridis* recorded with magneto-optical difference spectroscopy at 1.2–286 K. Temperature dependence of position and width of the long-wavelength absorption band 194 (1995) 387
Gillbro, T., see Pålsson, L.-O. 194 (1995) 291
Girardet, C., see Briquez, S. 194 (1995) 65
Görlach, E., H. Gygax, P. Lubini and U.P. Wild, Solvent relaxation of oxazine-4 in 2-methyltetrahydrofuran 194 (1995) 185
Goto, T., see Matsui, A.H. 194 (1995) 167
Gravili, C., see Iannotta, S. 194 (1995) 133
Grebenshchikov, S.Yu., see Benderskii, V.A. 194 (1995) 1
Gunde, K.E. and F.S. Richardson, Fluorescence-detected two-photon circular dichroism of Gd^{3+} in trigonal $Na_3[Gd(C_4H_4O_5)_3] \cdot 2NaClO_4 \cdot 6H_2O$ 194 (1995) 195
Gygax, H., see Görlach, E. 194 (1995) 185

Harris, F.M., see Andrews, S.R. 194 (1995) 215
Heywang, G., see Winter, I. 194 (1995) 207
Hikida, T., see Ide, Y. 194 (1995) 159

Hoff, A.J., see Gast, P. 194 (1995) 387
Hormes, J., see Winter, I. 194 (1995) 207
Huber, M. and J.T. Törring, High-field EPR on the primary electron donor cation radical in single crystals of heterodimer mutant reaction centers of photosynthetic bacteria – first characterization of the *G*-tensor 194 (1995) 379

Iannotta, S., C. Gravili, A. Boschetti, A. Cagol and M. Cacciatore, Energy transfer processes and surface corrugation: a combined collision dynamics and experimental study of the Xe–GaSe(001) system 194 (1995) 133
Ide, Y. and T. Hikida, Vibrational energy dependence of nonradiative decay rate: triplet benzene studied by time-resolved and steady-state photosensitized phosphorescence 194 (1995) 159
Irrgang, K.-D., see Bittner, T. 194 (1995) 311

Jankowiak, R., see Chang, H.-C. 194 (1995) 323
Jonas, F., see Winter, I. 194 (1995) 207
Jonsson, D., see Minaev, B.F. 194 (1995) 19
Joseph, D.M., see Klug, D.R. 194 (1995) 433

Kaminskaya, O., P.J. Bratt and M.C.W. Evans, EPR properties of the four hemes in the cytochrome subunit of reaction centres from *Rhodopseudomonas viridis*: characterization of the individual hemes 194 (1995) 335
Käß, H., E. Bittersmann-Weidlich, L.-E. Andréasson, B. Bönigk and W. Lubitz, ENDOR and ESEEM of the ^{15}N labelled radical cations of chlorophyll **a** and the primary donor P_{700} in Photosystem I 194 (1995) 419
Kennis, J.T.M., T.J. Aartsma and J. Amesz, Energy transfer between antenna complexes in the purple sulfur bacteria *Chromatium tepidum* and *Chromatium vinosum* 194 (1995) 285
Kiefer, P.M., V.B.P. Leite and R.M. Whitnell, A simple model for proton transfer 194 (1995) 33
Klein, M.P., see DeRose, V.J. 194 (1995) 443
Klug, D.R., T. Rech, D.M. Joseph, J. Barber, J.R. Durrant and G. Porter, Primary processes in isolated Photosystem II reaction centres probed by magic angle transient absorption spectroscopy 194 (1995) 433

Lakhlifi, A., see Briquez, S. 194 (1995) 65
Latimer, M.J., see DeRose, V.J. 194 (1995) 443
Le Calvé, N., see Ouafik, Z. 194 (1995) 145
Leite, V.B.P., see Kiefer, P.M. 194 (1995) 33
Lin, S., see Savikhin, S. 194 (1995) 245
Lous, E.J., see Gast, P. 194 (1995) 387
Lubini, P., see Görlach, E. 194 (1995) 185
Lubitz, W., see Käß, H. 194 (1995) 419
Lubitz, W., see Prisner, T.F. 194 (1995) 361
Lubitz, W., see van der Est, A. 194 (1995) 349

Matsui, A.H., K. Mizuno, O. Nishi, Y. Matsushima, M. Shimizu, T. Goto and M. Takeshima, Densities of states and band widths of excitons in anthracene microcrystallites embedded in PMMA 194 (1995) 167
Matsushima, Y., see Matsui, A.H. 194 (1995) 167
Mil'nikov, G.V., see Benderskii, V.A. 194 (1995) 1

Minaev, B.F., D. Jonsson, P. Norman and H. Ågren, Character and spectra of triplet states in short polyenes 194 (1995) 19
Mizuno, K., see Matsui, A.H. 194 (1995) 167
Möbius, K., see Prisner, T.F. 194 (1995) 361
Monshouwer, R., see Pullerits, T. 194 (1995) 395
Mukerji, I., see DeRose, V.J. 194 (1995) 443

Nabedryk, E., S. Andrianambinintsoa, D. Dejonghe and J. Breton, FTIR spectroscopy of the photoreduction of the bacteriopheophytin electron acceptor in reaction centers of *Rb. sphaeroides* and *Rps. viridis* 194 (1995) 371
Neidlinger, Th., see Warns, Ch. 194 (1995) 117
Neuheuser, T., N. Sukumar and S.D. Peyerimhoff, Nonadiabatic coupling of the 1 $^1A''$ and 2 $^1A''$ states of ozone 194 (1995) 45
Nishi, O., see Matsui, A.H. 194 (1995) 167
Norman, P., see Minaev, B.F. 194 (1995) 19
Novoderezhkin, V.I., see Dracheva, T.V. 194 (1995) 223

Olney, T.N., see Cooper, G. 194 (1995) 175
Ouafik, Z., N. Le Calvé and B. Pasquier, Vibrational study of various crystalline phases of thallium dihydrogen arsenate TlH_2AsO_4. Comparison with thallium dihydrogen phosphate TlH_2PO_4 194 (1995) 145

Pålsson, L.-O., S.E. Tjus, B. Andersson and T. Gillbro, Energy transfer in photosystem I. Time resolved fluorescence of the native photosystem I complex and its core complex 194 (1995) 291
Parry, D.E., see Andrews, S.R. 194 (1995) 215
Pasquier, B., see Ouafik, Z. 194 (1995) 145
Peyerimhoff, S.D., see Neuheuser, T. 194 (1995) 45
Picaud, S., see Briquez, S. 194 (1995) 65
Porter, G., see Klug, D.R. 194 (1995) 433
Prisner, T.F., A. van der Est, R. Bittl, W. Lubitz, D. Stehlik and K. Möbius, Time-resolved W-band (95 GHz) EPR spectroscopy of Zn-substituted reaction centers of *Rhodobacter sphaeroides* R-26 194 (1995) 361
Pullerits, T., R. Monshouwer, F. van Mourik and R. van Grondelle, Temperature dependence of electron–vibronic spectra of photosynthetic systems. Computer simulations and comparison with experiment 194 (1995) 395

Razjivin, A.P., see Dracheva, T.V. 194 (1995) 223
Rech, T., see Klug, D.R. 194 (1995) 433
Reese, C., see Winter, I. 194 (1995) 207
Reineker, P., see Warns, Ch. 194 (1995) 117
Renger, G., see Bittner, T. 194 (1995) 311
Richardson, F.S., see Gunde, K.E. 194 (1995) 195

Sauer, K., see DeRose, V.J. 194 (1995) 443
Savikhin, S., P.I. van Noort, Y. Zhu, S. Lin, R.E. Blankenship and W.S. Struve, Ultrafast energy transfer in light-harvesting chlorosomes from the green sulfur bacterium *Chlorobium tepidum* 194 (1995) 245
Schelvis, J.P.M. and T.J. Aartsma, Transient absorption changes of a degenerate dimer induced by exciton scattering; implications for Photosystem II of photosynthesis 194 (1995) 303

Shimizu, M., see Matsui, A.H. 194 (1995) 167
Sieckmann, I., see van der Est, A. 194 (1995) 349
Small, G.J., see Chang, H.-C. 194 (1995) 323
Stehlik, D., see Prisner, T.F. 194 (1995) 361
Stehlik, D., see van der Est, A. 194 (1995) 349
Struve, W.S., see Savikhin, S. 194 (1995) 245
Sukumar, N., see Neuheuser, T. 194 (1995) 45
Sundström, V., see Timpmann, K. 194 (1995) 275

Takeshima, M., see Matsui, A.H. 194 (1995) 167
Timpmann, K., A. Freiberg and V. Sundström, Energy trapping and detrapping in the photosynthetic bacterium *Rhodopseudomonas viridis*: transfer-to-trap-limited dynamics 194 (1995) 275
Tjus, S.E., see Pålsson, L.-O. 194 (1995) 291
Tonnard, F., see Botrel, A. 194 (1995) 101
Törring, J.T., see Huber, M. 194 (1995) 379

van der Est, A., I. Sieckmann, W. Lubitz and D. Stehlik, Differences in the binding of the primary quinone acceptor in Photosystem I and reaction centres of *Rhodobacter Sphaeroides*-R26 studied with transient EPR spectroscopy 194 (1995) 349
van der Est, A., see Prisner, T.F. 194 (1995) 361
van Grondelle, R., see Pullerits, T. 194 (1995) 395
van Mourik, F., see Pullerits, T. 194 (1995) 395
van Noort, P.I., see Savikhin, S. 194 (1995) 245
Varandas, A.J.C. and A.I. Voronin, Calculation of the asymptotic interaction and modelling of the potential energy curves of OH and OH^+ 194 (1995) 91
Voronin, A.I., see Varandas, A.J.C. 194 (1995) 91

Warns, Ch., I. Barvík, P. Reineker and Th. Neidlinger, Influence of dichotomic colored energy fluctuations on excitonic optical line shapes of trimers and tetramers 194 (1995) 117
Wasielewski, M.R., see Bittner, T. 194 (1995) 311
Whitnell, R.M., see Kiefer, P.M. 194 (1995) 33
Wiederrecht, G.P., see Bittner, T. 194 (1995) 311
Wild, U.P., see Görlach, E. 194 (1995) 185
Winter, I., C. Reese, J. Hormes, G. Heywang and F. Jonas, The thermal ageing of poly(3,4-ethylenedioxythiophene). An investigation by X-ray absorption and X-ray photoelectron spectroscopy 194 (1995) 207

Yachandra, V.K., see DeRose, V.J. 194 (1995) 443

Zhu, Y., see Savikhin, S. 194 (1995) 245
Zimmermann, J.-L., see DeRose, V.J. 194 (1995) 443

ELSEVIER

Chemical Physics 194 (1995) 465–477

Chemical Physics

Subject index to volume 194

Methods

Theoretical

Classical mechanics

Tunneling splittings in model 2D potentials. II. $V(X, Y) = \lambda(X^2 - X_0^2)^2 - CX^2(Y - Y_0) + \frac{1}{2}\Omega^2(Y - Y_0 + CX_0^2/\Omega^2)^2 - C^2X_0^4/2\Omega^2$, V.A. Benderskii, S.Yu. Grebenshchikov and G.V. Mil'nikov 194 (1995) 1

Coupling schemes and perturbative treatments

Character and spectra of triplet states in short polyenes, B.F. Minaev, D. Jonsson, P. Norman and H. Ågren 194 (1995) 19

Transport quantum mechanics

Tunneling splittings in model 2D potentials. II. $V(X, Y) = \lambda(X^2 - X_0^2)^2 - CX^2(Y - Y_0) + \frac{1}{2}\Omega^2(Y - Y_0 + CX_0^2/\Omega^2)^2 - C^2X_0^4/2\Omega^2$, V.A. Benderskii, S.Yu. Grebenshchikov and G.V. Mil'nikov 194 (1995) 1

A simple model for proton transfer, P.M. Kiefer, V.B.P. Leite and R.M. Whitnell 194 (1995) 33

Ab initio schemes for stationary properties

Character and spectra of triplet states in short polyenes, B.F. Minaev, D. Jonsson, P. Norman and H. Ågren 194 (1995) 19

Nonadiabatic coupling of the 1 ^{1}A″ and 2 ^{1}A″ states of ozone, T. Neuheuser, N. Sukumar and S.D. Peyerimhoff 194 (1995) 45

Computational and simulation methods

Tunneling splittings in model 2D potentials. II. $V(X, Y) = \lambda(X^2 - X_0^2)^2 - CX^2(Y - Y_0) + \frac{1}{2}\Omega^2(Y - Y_0 + CX_0^2/\Omega^2)^2 - C^2X_0^4/2\Omega^2$, V.A. Benderskii, S.Yu. Grebenshchikov and G.V. Mil'nikov 194 (1995) 1

Nonadiabatic coupling of the 1 ^{1}A″ and 2 ^{1}A″ states of ozone, T. Neuheuser, N. Sukumar and S.D. Peyerimhoff 194 (1995) 45

Molecular adsorption on ionic substrates: characterization of terrace and step sites, S. Briquez, A. Lakhlifi, S. Picaud and C. Girardet 194 (1995) 65

A multiple scattering EXAFS study of organometallic compounds: $W(CO)_6$ and (1,3,5-trimethylbenzene)$W(CO)_3$, R. Crüsemann, F. Bökman, V. Fritzsche and H. Bertagnolli 194 (1995) 81

Calculation of the asymptotic interaction and modelling of the potential energy curves of OH and OH^+, A.J.C. Varandas and A.I. Voronin 194 (1995) 91
A theoretical investigation of solvatochromism. Application to merocyanines similar to colored forms obtained by flash-photolysis of spiropyrans, A. Botrel, B. Aboab, F. Corre and F. Tonnard 194 (1995) 101
Influence of dichotomic colored energy fluctuations on excitonic optical line shapes of trimers and tetramers, Ch. Warns, I. Barvík, P. Reineker and Th. Neidlinger 194 (1995) 117
Exciton theory of spectra and energy transfer in photosynthesis: spectral hole burning in the antenna of purple bacteria, T.V. Dracheva, V.I. Novoderezhkin and A.P. Razjivin 194 (1995) 223
Temperature dependence of electron–vibronic spectra of photosynthetic systems. Computer simulations and comparison with experiment, T. Pullerits, R. Monshouwer, F. van Mourik and R. van Grondelle 194 (1995) 395

Molecular dynamics and scattering theory
Energy transfer processes and surface corrugation: a combined collision dynamics and experimental study of the Xe–GaSe(001) system, S. Iannotta, C. Gravili, A. Boschetti, A. Cagol and M. Cacciatore 194 (1995) 133

Experimental

Magnetic resonances
EPR properties of the four hemes in the cytochrome subunit of reaction centres from *Rhodopseudomonas viridis*: characterization of the individual hemes, O. Kaminskaya, P.J. Bratt and M.C.W. Evans 194 (1995) 335
High-field EPR on the primary electron donor cation radical in single crystals of heterodimer mutant reaction centers of photosynthetic bacteria – first characterization of the *G*-tensor, M. Huber and J.T. Törring 194 (1995) 379
Exchange of chloride by bromide in the manganese Photosystem-II complex studied by cw- and pulsed-EPR, A. Boussac 194 (1995) 409
ENDOR and ESEEM of the ^{15}N labelled radical cations of chlorophyll **a** and the primary donor P_{700} in Photosystem I, H. Käß, E. Bittersmann-Weidlich, L.-E. Andréasson, B. Bönigk and W. Lubitz 194 (1995) 419
Fluoride substitution in the Mn cluster from Photosystem II: EPR and X-ray absorption spectroscopy studies, V.J. DeRose, M.J. Latimer, J.-L. Zimmermann, I. Mukerji, V.K. Yachandra, K. Sauer and M.P. Klein 194 (1995) 443

Infrared spectroscopy
Molecular adsorption on ionic substrates: characterization of terrace and step sites, S. Briquez, A. Lakhlifi, S. Picaud and C. Girardet 194 (1995) 65
Vibrational study of various crystalline phases of thallium dihydrogen arsenate TlH_2AsO_4. Comparison with thallium dihydrogen phosphate TlH_2PO_4, Z. Ouafik, N. Le Calvé and B. Pasquier 194 (1995) 145
FTIR spectroscopy of the photoreduction of the bacteriopheophytin electron acceptor in reaction centers of *Rb. sphaeroides* and *Rps. viridis*, E. Nabedryk, S. Andrianambinintsoa, D. Dejonghe and J. Breton 194 (1995) 371

Raman spectroscopy

Vibrational study of various crystalline phases of thallium dihydrogen arsenate TlH_2AsO_4. Comparison with thallium dihydrogen phosphate TlH_2PO_4, Z. Ouafik, N. Le Calvé and B. Pasquier 194 (1995) 145

Visible and UV spectroscopy

Vibrational energy dependence of nonradiative decay rate: triplet benzene studied by time-resolved and steady-state photosensitized phosphorescence, Y. Ide and T. Hikida 194 (1995) 159

Densities of states and band widths of excitons in anthracene microcrystallites embedded in PMMA, A.H. Matsui, K. Mizuno, O. Nishi, Y. Matsushima, M. Shimizu, T. Goto and M. Takeshima 194 (1995) 167

Absolute UV and Soft X-ray photoabsorption of ethylene by high resolution dipole (e, e) spectroscopy, G. Cooper, T.N. Olney and C.E. Brion 194 (1995) 175

Energy transfer between antenna complexes in the purple sulfur bacteria *Chromatium tepidum* and *Chromatium vinosum*, J.T.M. Kennis, T.J. Aartsma and J. Amesz 194 (1995) 285

Temperature dependent hole burning of the 684 nm chlorophyll *a* of the isolated reaction center of Photosystem II: confirmation of the linker model, H.-C. Chang, G.J. Small and R. Jankowiak 194 (1995) 323

Triplet–singlet difference spectra of *Rps. viridis* recorded with magneto-optical difference spectroscopy at 1.2–286 K. Temperature dependence of position and width of the long-wavelength absorption band, P. Gast, E.J. Lous and A.J. Hoff 194 (1995) 387

Fluorescence spectroscopy

Solvent relaxation of oxazine-4 in 2-methyltetrahydrofuran, E. Görlach, H. Gygax, P. Lubini and U.P. Wild 194 (1995) 185

Fluorescence-detected two-photon circular dichroism of Gd^{3+} in trigonal $Na_3[Gd(C_4H_4O_5)_3] \cdot 2NaClO_4 \cdot 6H_2O$, K.E. Gunde and F.S. Richardson 194 (1995) 195

Optical and optically detected magnetic resonance investigation on purple photosynthetic bacterial antenna complexes, A. Angerhofer, F. Bornhäuser, A. Gall and R.J. Cogdell 194 (1995) 259

Energy trapping and detrapping in the photosynthetic bacterium *Rhodopseudomonas viridis*: transfer-to-trap-limited dynamics, K. Timpmann, A. Freiberg and V. Sundström 194 (1995) 275

Temperature dependence of electron–vibronic spectra of photosynthetic systems. Computer simulations and comparison with experiment, T. Pullerits, R. Monshouwer, F. van Mourik and R. van Grondelle 194 (1995) 395

Photoelectron and Auger spectroscopy

The thermal ageing of poly(3,4-ethylenedioxythiophene). An investigation by X-ray absorption and X-ray photoelectron spectroscopy, I. Winter, C. Reese, J. Hormes, G. Heywang and F. Jonas 194 (1995) 207

X-ray spectroscopy

A multiple scattering EXAFS study of organometallic compounds: $W(CO)_6$ and (1,3,5-trimethylbenzene)$W(CO)_3$, R. Crüsemann, F. Bökman, V. Fritzsche and H. Bertagnolli 194 (1995) 81

The thermal ageing of poly(3,4-ethylenedioxythiophene). An investigation by X-ray absorption and X-ray photoelectron spectroscopy, I. Winter, C. Reese, J. Hormes, G. Heywang and F. Jonas 194 (1995) 207

Fluoride substitution in the Mn cluster from Photosystem II: EPR and X-ray absorption spectroscopy studies, V.J. DeRose, M.J. Latimer, J.-L. Zimmermann, I. Mukerji, V.K. Yachandra, K. Sauer and M.P. Klein 194 (1995) 443

Laser methods

Ultrafast energy transfer in light-harvesting chlorosomes from the green sulfur bacterium *Chlorobium tepidum*, S. Savikhin, P.I. van Noort, Y. Zhu, S. Lin, R.E. Blankenship and W.S. Struve 194 (1995) 245

Energy transfer in photosystem I. Time resolved fluorescence of the native photosystem I complex and its core complex, L.-O. Pålsson, S.E. Tjus, B. Andersson and T. Gillbro 194 (1995) 291

Picosecond spectroscopy

Solvent relaxation of oxazine-4 in 2-methyltetrahydrofuran, E. Görlach, H. Gygax, P. Lubini and U.P. Wild 194 (1995) 185

Exciton theory of spectra and energy transfer in photosynthesis: spectral hole burning in the antenna of purple bacteria, T.V. Dracheva, V.I. Novoderezhkin and A.P. Razjivin 194 (1995) 223

The application of the energy gap law to the S_1 energies and dynamics of carotenoids, V. Chynwat and H.A. Frank 194 (1995) 237

Energy trapping and detrapping in the photosynthetic bacterium *Rhodopseudomonas viridis*: transfer-to-trap-limited dynamics, K. Timpmann, A. Freiberg and V. Sundström 194 (1995) 275

Energy transfer between antenna complexes in the purple sulfur bacteria *Chromatium tepidum* and *Chromatium vinosum*, J.T.M. Kennis, T.J. Aartsma and J. Amesz 194 (1995) 285

Energy transfer in photosystem I. Time resolved fluorescence of the native photosystem I complex and its core complex, L.-O. Pålsson, S.E. Tjus, B. Andersson and T. Gillbro 194 (1995) 291

Femtosecond transient absorption spectroscopy on the light-harvesting Chl *a*/*b* protein complex of Photosystem II at room temperature and 12 K, T. Bittner, G.P. Wiederrecht, K.-D. Irrgang, G. Renger and M.R. Wasielewski 194 (1995) 311

Primary processes in isolated Photosystem II reaction centres probed by magic angle transient absorption spectroscopy, D.R. Klug, T. Rech, D.M. Joseph, J. Barber, J.R. Durrant and G. Porter 194 (1995) 433

Non-linear optical spectroscopy

Fluorescence-detected two-photon circular dichroism of Gd^{3+} in trigonal $Na_3[Gd(C_4H_4O_5)_3] \cdot 2NaClO_4 \cdot 6H_2O$, K.E. Gunde and F.S. Richardson 194 (1995) 195

Synchrotron spectroscopies

A multiple scattering EXAFS study of organometallic compounds: $W(CO)_6$ and (1,3,5-trimethylbenzene)$W(CO)_3$, R. Crüsemann, F. Bökman, V. Fritzsche and H. Bertagnolli 194 (1995) 81

Multiple resonance spectroscopy

ENDOR and ESEEM of the ^{15}N labelled radical cations of chlorophyll **a** and the primary donor P_{700} in Photosystem I, H. Käß, E. Bittersmann-Weidlich, L.-E. Andréasson, B. Bönigk and W. Lubitz 194 (1995) 419

Atomic and molecular beam techniques

Energy transfer processes and surface corrugation: a combined collision dynamics and experimental study of the Xe–GaSe(001) system, S. Iannotta, C. Gravili, A. Boschetti, A. Cagol and M. Cacciatore 194 (1995) 133

Double ionization of the propyne molecule to ground and electronically excited states of the doubly charged ion, S.R. Andrews, F.M. Harris and D.E. Parry 194 (1995) 215

Time-resolved experiments
Vibrational energy dependence of nonradiative decay rate: triplet benzene studied by time-resolved and steady-state photosensitized phosphorescence, Y. Ide and T. Hikida 194 (1995) 159
Solvent relaxation of oxazine-4 in 2-methyltetrahydrofuran, E. Görlach, H. Gygax, P. Lubini and U.P. Wild 194 (1995) 185
Ultrafast energy transfer in light-harvesting chlorosomes from the green sulfur bacterium *Chlorobium tepidum*, S. Savikhin, P.I. van Noort, Y. Zhu, S. Lin, R.E. Blankenship and W.S. Struve 194 (1995) 245
Energy transfer between antenna complexes in the purple sulfur bacteria *Chromatium tepidum* and *Chromatium vinosum*, J.T.M. Kennis, T.J. Aartsma and J. Amesz 194 (1995) 285
Energy transfer in photosystem I. Time resolved fluorescence of the native photosystem I complex and its core complex, L.-O. Pålsson, S.E. Tjus, B. Andersson and T. Gillbro 194 (1995) 291
Transient absorption changes of a degenerate dimer induced by exciton scattering; implications for Photosystem II of photosynthesis, J.P.M. Schelvis and T.J. Aartsma 194 (1995) 303
Differences in the binding of the primary quinone acceptor in Photosystem I and reaction centres of *Rhodobacter Sphaeroides*-R26 studied with transient EPR spectroscopy, A. van der Est, I. Sieckmann, W. Lubitz and D. Stehlik 194 (1995) 349
Time-resolved W-band (95 GHz) EPR spectroscopy of Zn-substituted reaction centers of *Rhodobacter sphaeroides* R-26, T.F. Prisner, A. van der Est, R. Bittl, W. Lubitz, D. Stehlik and K. Möbius 194 (1995) 361

Mass spectrometry
Double ionization of the propyne molecule to ground and electronically excited states of the doubly charged ion, S.R. Andrews, F.M. Harris and D.E. Parry 194 (1995) 215

Neutron scattering
Vibrational study of various crystalline phases of thallium dihydrogen arsenate TlH_2AsO_4. Comparison with thallium dihydrogen phosphate TlH_2PO_4, Z. Ouafik, N. Le Calvé and B. Pasquier 194 (1995) 145

Objects

Bulk systems

Gases
Vibrational energy dependence of nonradiative decay rate: triplet benzene studied by time-resolved and steady-state photosensitized phosphorescence, Y. Ide and T. Hikida 194 (1995) 159

Liquid mixtures and solutions
Solvent relaxation of oxazine-4 in 2-methyltetrahydrofuran, E. Görlach, H. Gygax, P. Lubini and U.P. Wild 194 (1995) 185

Crystals
Vibrational study of various crystalline phases of thallium dihydrogen arsenate TlH_2AsO_4. Comparison with thallium dihydrogen phosphate TlH_2PO_4, Z. Ouafik, N. Le Calvé and B. Pasquier 194 (1995) 145

Densities of states and band widths of excitons in anthracene microcrystallites embedded in PMMA, A.H. Matsui, K. Mizuno, O. Nishi, Y. Matsushima, M. Shimizu, T. Goto and M. Takeshima 194 (1995) 167

-neat

Fluorescence-detected two-photon circular dichroism of Gd^{3+} in trigonal $Na_3[Gd(C_4H_4O_5)_3] \cdot 2NaClO_4 \cdot 6H_2O$, K.E. Gunde and F.S. Richardson 194 (1995) 195

High-field EPR on the primary electron donor cation radical in single crystals of heterodimer mutant reaction centers of photosynthetic bacteria – first characterization of the *G*-tensor, M. Huber and J.T. Törring 194 (1995) 379

Glasses

Temperature dependent hole burning of the 684 nm chlorophyll *a* of the isolated reaction center of Photosystem II: confirmation of the linker model, H.-C. Chang, G.J. Small and R. Jankowiak 194 (1995) 323

Polymers

The thermal ageing of poly(3,4-ethylenedioxythiophene). An investigation by X-ray absorption and X-ray photoelectron spectroscopy, I. Winter, C. Reese, J. Hormes, G. Heywang and F. Jonas 194 (1995) 207

Surfaces

Molecular adsorption on ionic substrates: characterization of terrace and step sites, S. Briquez, A. Lakhlifi, S. Picaud and C. Girardet 194 (1995) 65

Energy transfer processes and surface corrugation: a combined collision dynamics and experimental study of the Xe–GaSe(001) system, S. Iannotta, C. Gravili, A. Boschetti, A. Cagol and M. Cacciatore 194 (1995) 133

Biological systems

Exciton theory of spectra and energy transfer in photosynthesis: spectral hole burning in the antenna of purple bacteria, T.V. Dracheva, V.I. Novoderezhkin and A.P. Razjivin 194 (1995) 223

Ultrafast energy transfer in light-harvesting chlorosomes from the green sulfur bacterium *Chlorobium tepidum*, S. Savikhin, P.I. van Noort, Y. Zhu, S. Lin, R.E. Blankenship and W.S. Struve 194 (1995) 245

Optical and optically detected magnetic resonance investigation on purple photosynthetic bacterial antenna complexes, A. Angerhofer, F. Bornhäuser, A. Gall and R.J. Cogdell 194 (1995) 259

Energy trapping and detrapping in the photosynthetic bacterium *Rhodopseudomonas viridis*: transfer-to-trap-limited dynamics, K. Timpmann, A. Freiberg and V. Sundström 194 (1995) 275

Energy transfer between antenna complexes in the purple sulfur bacteria *Chromatium tepidum* and *Chromatium vinosum*, J.T.M. Kennis, T.J. Aartsma and J. Amesz 194 (1995) 285

Energy transfer in photosystem I. Time resolved fluorescence of the native photosystem I complex and its core complex, L.-O. Pålsson, S.E. Tjus, B. Andersson and T. Gillbro 194 (1995) 291

Temperature dependent hole burning of the 684 nm chlorophyll *a* of the isolated reaction center of Photosystem II: confirmation of the linker model, H.-C. Chang, G.J. Small and R. Jankowiak 194 (1995) 323

EPR properties of the four hemes in the cytochrome subunit of reaction centres from *Rhodopseudomonas viridis*: characterization of the individual hemes, O. Kaminskaya, P.J. Bratt and M.C.W. Evans 194 (1995) 335

Differences in the binding of the primary quinone acceptor in Photosystem I and reaction centres of *Rhodobacter Sphaeroides*-R26 studied with transient EPR spectroscopy, A. van der Est, I. Sieckmann, W. Lubitz and D. Stehlik 194 (1995) 349
Time-resolved W-band (95 GHz) EPR spectroscopy of Zn-substituted reaction centers of *Rhodobacter sphaeroides* R-26, T.F. Prisner, A. van der Est, R. Bittl, W. Lubitz, D. Stehlik and K. Möbius 194 (1995) 361
FTIR spectroscopy of the photoreduction of the bacteriopheophytin electron acceptor in reaction centers of *Rb. sphaeroides* and *Rps. viridis*, E. Nabedryk, S. Andrianambinintsoa, D. Dejonghe and J. Breton 194 (1995) 371
Triplet–singlet difference spectra of *Rps. viridis* recorded with magneto-optical difference spectroscopy at 1.2–286 K. Temperature dependence of position and width of the long-wavelength absorption band, P. Gast, E.J. Lous and A.J. Hoff 194 (1995) 387
Temperature dependence of electron–vibronic spectra of photosynthetic systems. Computer simulations and comparison with experiment, T. Pullerits, R. Monshouwer, F. van Mourik and R. van Grondelle 194 (1995) 395
Exchange of chloride by bromide in the manganese Photosystem-II complex studied by cw- and pulsed-EPR, A. Boussac 194 (1995) 409
ENDOR and ESEEM of the ^{15}N labelled radical cations of chlorophyll **a** and the primary donor P_{700} in Photosystem I, H. Käß, E. Bittersmann-Weidlich, L.-E. Andréasson, B. Bönigk and W. Lubitz 194 (1995) 419
Fluoride substitution in the Mn cluster from Photosystem II: EPR and X-ray absorption spectroscopy studies, V.J. DeRose, M.J. Latimer, J.-L. Zimmermann, I. Mukerji, V.K. Yachandra, K. Sauer and M.P. Klein 194 (1995) 443
Primary processes in isolated Photosystem II reaction centres probed by magic angle transient absorption spectroscopy, D.R. Klug, T. Rech, D.M. Joseph, J. Barber, J.R. Durrant and G. Porter 194 (1995) 433

Microscopic systems

Molecules (neutral and ionic)

Double ionization of the propyne molecule to ground and electronically excited states of the doubly charged ion, S.R. Andrews, F.M. Harris and D.E. Parry 194 (1995) 215

-diatomic

Calculation of the asymptotic interaction and modelling of the potential energy curves of OH and OH^+, A.J.C. Varandas and A.I. Voronin 194 (1995) 91

-small polyatomics

Character and spectra of triplet states in short polyenes, B.F. Minaev, D. Jonsson, P. Norman and H. Ågren 194 (1995) 19
Nonadiabatic coupling of the $1\ ^1A''$ and $2\ ^1A''$ states of ozone, T. Neuheuser, N. Sukumar and S.D. Peyerimhoff 194 (1995) 45
Absolute UV and Soft X-ray photoabsorption of ethylene by high resolution dipole (e, e) spectroscopy, G. Cooper, T.N. Olney and C.E. Brion 194 (1995) 175

-aromatics

A theoretical investigation of solvatochromism. Application to merocyanines similar to colored forms obtained by flash-photolysis of spiropyrans, A. Botrel, B. Aboab, F. Corre and F. Tonnard 194 (1995) 101

Densities of states and band widths of excitons in anthracene microcrystallites embedded in PMMA, A.H. Matsui, K. Mizuno, O. Nishi, Y. Matsushima, M. Shimizu, T. Goto and M. Takeshima 194 (1995) 167

-other large

Tunneling splittings in model 2D potentials. II. $V(X, Y) = \lambda(X^2 - X_0^2)^2 - CX^2(Y - Y_0) + \frac{1}{2}\Omega^2(Y - Y_0 + CX_0^2/\Omega^2)^2 - C^2X_0^4/2\Omega^2$, V.A. Benderskii, S.Yu. Grebenshchikov and G.V. Mil'nikov 194 (1995) 1

A theoretical investigation of solvatochromism. Application to merocyanines similar to colored forms obtained by flash-photolysis of spiropyrans, A. Botrel, B. Aboab, F. Corre and F. Tonnard 194 (1995) 101

The application of the energy gap law to the S_1 energies and dynamics of carotenoids, V. Chynwat and H.A. Frank 194 (1995) 237

-polymeric and biological

Ultrafast energy transfer in light-harvesting chlorosomes from the green sulfur bacterium *Chlorobium tepidum*, S. Savikhin, P.I. van Noort, Y. Zhu, S. Lin, R.E. Blankenship and W.S. Struve 194 (1995) 245

Femtosecond transient absorption spectroscopy on the light-harvesting Chl *a/b* protein complex of Photosystem II at room temperature and 12 K, T. Bittner, G.P. Wiederrecht, K.-D. Irrgang, G. Renger and M.R. Wasielewski 194 (1995) 311

High-field EPR on the primary electron donor cation radical in single crystals of heterodimer mutant reaction centers of photosynthetic bacteria – first characterization of the *G*-tensor, M. Huber and J.T. Törring 194 (1995) 379

Molecular aggregates

Influence of dichotomic colored energy fluctuations on excitonic optical line shapes of trimers and tetramers, Ch. Warns, I. Barvík, P. Reineker and Th. Neidlinger 194 (1995) 117

Time-resolved W-band (95 GHz) EPR spectroscopy of Zn-substituted reaction centers of *Rhodobacter sphaeroides* R-26, T.F. Prisner, A. van der Est, R. Bittl, W. Lubitz, D. Stehlik and K. Möbius 194 (1995) 361

-dimers

Transient absorption changes of a degenerate dimer induced by exciton scattering; implications for Photosystem II of photosynthesis, J.P.M. Schelvis and T.J. Aartsma 194 (1995) 303

Temperature dependence of electron–vibronic spectra of photosynthetic systems. Computer simulations and comparison with experiment, T. Pullerits, R. Monshouwer, F. van Mourik and R. van Grondelle 194 (1995) 395

-complexes

A multiple scattering EXAFS study of organometallic compounds: $W(CO)_6$ and (1,3,5-trimethylbenzene)$W(CO)_3$, R. Crüsemann, F. Bökman, V. Fritzsche and H. Bertagnolli 194 (1995) 81

Exciton theory of spectra and energy transfer in photosynthesis: spectral hole burning in the antenna of purple bacteria, T.V. Dracheva, V.I. Novoderezhkin and A.P. Razjivin 194 (1995) 223

Optical and optically detected magnetic resonance investigation on purple photosynthetic bacterial antenna complexes, A. Angerhofer, F. Bornhäuser, A. Gall and R.J. Cogdell 194 (1995) 259

Primary processes in isolated Photosystem II reaction centres probed by magic angle transient absorption spectroscopy, D.R. Klug, T. Rech, D.M. Joseph, J. Barber, J.R. Durrant and G. Porter 194 (1995) 433

Quasiparticles (including excitons)
Influence of dichotomic colored energy fluctuations on excitonic optical line shapes of trimers and tetramers, Ch. Warns, I. Barvík, P. Reineker and Th. Neidlinger 194 (1995) 117

Phenomena

Molecular structure
A multiple scattering EXAFS study of organometallic compounds: $W(CO)_6$ and (1,3,5-trimethylbenzene)$W(CO)_3$, R. Crüsemann, F. Bökman, V. Fritzsche and H. Bertagnolli 194 (1995) 81
A theoretical investigation of solvatochromism. Application to merocyanines similar to colored forms obtained by flash-photolysis of spiropyrans, A. Botrel, B. Aboab, F. Corre and F. Tonnard 194 (1995) 101
Fluoride substitution in the Mn cluster from Photosystem II: EPR and X-ray absorption spectroscopy studies, V.J. DeRose, M.J. Latimer, J.-L. Zimmermann, I. Mukerji, V.K. Yachandra, K. Sauer and M.P. Klein 194 (1995) 443

Vibrations and rotations of molecules
Molecular adsorption on ionic substrates: characterization of terrace and step sites, S. Briquez, A. Lakhlifi, S. Picaud and C. Girardet 194 (1995) 65
Calculation of the asymptotic interaction and modelling of the potential energy curves of OH and OH^+, A.J.C. Varandas and A.I. Voronin 194 (1995) 91

Electronic structure and states
Character and spectra of triplet states in short polyenes, B.F. Minaev, D. Jonsson, P. Norman and H. Ågren 194 (1995) 19
Nonadiabatic coupling of the 1 $^1A''$ and 2 $^1A''$ states of ozone, T. Neuheuser, N. Sukumar and S.D. Peyerimhoff 194 (1995) 45
Calculation of the asymptotic interaction and modelling of the potential energy curves of OH and OH^+, A.J.C. Varandas and A.I. Voronin 194 (1995) 91
A theoretical investigation of solvatochromism. Application to merocyanines similar to colored forms obtained by flash-photolysis of spiropyrans, A. Botrel, B. Aboab, F. Corre and F. Tonnard 194 (1995) 101
Densities of states and band widths of excitons in anthracene microcrystallites embedded in PMMA, A.H. Matsui, K. Mizuno, O. Nishi, Y. Matsushima, M. Shimizu, T. Goto and M. Takeshima 194 (1995) 167
Double ionization of the propyne molecule to ground and electronically excited states of the doubly charged ion, S.R. Andrews, F.M. Harris and D.E. Parry 194 (1995) 215
The application of the energy gap law to the S_1 energies and dynamics of carotenoids, V. Chynwat and H.A. Frank 194 (1995) 237
Triplet–singlet difference spectra of *Rps. viridis* recorded with magneto-optical difference spectroscopy at 1.2–286 K. Temperature dependence of position and width of the long-wavelength absorption band, P. Gast, E.J. Lous and A.J. Hoff 194 (1995) 387

ENDOR and ESEEM of the ^{15}N labelled radical cations of chlorophyll **a** and the primary donor P_{700} in Photosystem I, H. Käß, E. Bittersmann-Weidlich, L.-E. Andréasson, B. Bönigk and W. Lubitz 194 (1995) 419

Electric and magnetic properties

High-field EPR on the primary electron donor cation radical in single crystals of heterodimer mutant reaction centers of photosynthetic bacteria – first characterization of the *G*-tensor, M. Huber and J.T. Törring 194 (1995) 379

Exchange of chloride by bromide in the manganese Photosystem-II complex studied by cw- and pulsed-EPR, A. Boussac 194 (1995) 409

Spin splittings

Time-resolved W-band (95 GHz) EPR spectroscopy of Zn-substituted reaction centers of *Rhodobacter sphaeroides* R-26, T.F. Prisner, A. van der Est, R. Bittl, W. Lubitz, D. Stehlik and K. Möbius 194 (1995) 361

Optical activity

Fluorescence-detected two-photon circular dichroism of Gd^{3+} in trigonal $Na_3[Gd(C_4H_4O_5)_3] \cdot 2NaClO_4 \cdot 6H_2O$, K.E. Gunde and F.S. Richardson 194 (1995) 195

Molecular interactions

Calculation of the asymptotic interaction and modelling of the potential energy curves of OH and OH^+, A.J.C. Varandas and A.I. Voronin 194 (1995) 91

Transient absorption changes of a degenerate dimer induced by exciton scattering; implications for Photosystem II of photosynthesis, J.P.M. Schelvis and T.J. Aartsma 194 (1995) 303

FTIR spectroscopy of the photoreduction of the bacteriopheophytin electron acceptor in reaction centers of *Rb. sphaeroides* and *Rps. viridis*, E. Nabedryk, S. Andrianambinintsoa, D. Dejonghe and J. Breton 194 (1995) 371

Spectral bandshapes and intensities

Absolute UV and Soft X-ray photoabsorption of ethylene by high resolution dipole (e, e) spectroscopy, G. Cooper, T.N. Olney and C.E. Brion 194 (1995) 175

Coupling of electronic and nuclear motion

Nonadiabatic coupling of the 1 $^1A''$ and 2 $^1A''$ states of ozone, T. Neuheuser, N. Sukumar and S.D. Peyerimhoff 194 (1995) 45

Temperature dependence of electron–vibronic spectra of photosynthetic systems. Computer simulations and comparison with experiment, T. Pullerits, R. Monshouwer, F. van Mourik and R. van Grondelle 194 (1995) 395

Energy transfer processes

Influence of dichotomic colored energy fluctuations on excitonic optical line shapes of trimers and tetramers, Ch. Warns, I. Barvík, P. Reineker and Th. Neidlinger 194 (1995) 117

Energy transfer processes and surface corrugation: a combined collision dynamics and experimental study of the Xe–GaSe(001) system, S. Iannotta, C. Gravili, A. Boschetti, A. Cagol and M. Cacciatore 194 (1995) 133

Vibrational energy dependence of nonradiative decay rate: triplet benzene studied by time-resolved and steady-state photosensitized phosphorescence, Y. Ide and T. Hikida 194 (1995) 159

Exciton theory of spectra and energy transfer in photosynthesis: spectral hole burning in the antenna of purple bacteria, T.V. Dracheva, V.I. Novoderezhkin and A.P. Razjivin 194 (1995) 223
The application of the energy gap law to the S_1 energies and dynamics of carotenoids, V. Chynwat and H.A. Frank 194 (1995) 237
Ultrafast energy transfer in light-harvesting chlorosomes from the green sulfur bacterium *Chlorobium tepidum*, S. Savikhin, P.I. van Noort, Y. Zhu, S. Lin, R.E. Blankenship and W.S. Struve 194 (1995) 245
Energy trapping and detrapping in the photosynthetic bacterium *Rhodopseudomonas viridis*: transfer-to-trap-limited dynamics, K. Timpmann, A. Freiberg and V. Sundström 194 (1995) 275
Energy transfer between antenna complexes in the purple sulfur bacteria *Chromatium tepidum* and *Chromatium vinosum*, J.T.M. Kennis, T.J. Aartsma and J. Amesz 194 (1995) 285
Energy transfer in photosystem I. Time resolved fluorescence of the native photosystem I complex and its core complex, L.-O. Pålsson, S.E. Tjus, B. Andersson and T. Gillbro 194 (1995) 291
Femtosecond transient absorption spectroscopy on the light-harvesting Chl *a*/*b* protein complex of Photosystem II at room temperature and 12 K, T. Bittner, G.P. Wiederrecht, K.-D. Irrgang, G. Renger and M.R. Wasielewski 194 (1995) 311
Temperature dependent hole burning of the 684 nm chlorophyll *a* of the isolated reaction center of Photosystem II: confirmation of the linker model, H.-C. Chang, G.J. Small and R. Jankowiak 194 (1995) 323
Primary processes in isolated Photosystem II reaction centres probed by magic angle transient absorption spectroscopy, D.R. Klug, T. Rech, D.M. Joseph, J. Barber, J.R. Durrant and G. Porter 194 (1995) 433

Molecular photophysical processes
Influence of dichotomic colored energy fluctuations on excitonic optical line shapes of trimers and tetramers, Ch. Warns, I. Barvík, P. Reineker and Th. Neidlinger 194 (1995) 117
Absolute UV and Soft X-ray photoabsorption of ethylene by high resolution dipole (e, e) spectroscopy, G. Cooper, T.N. Olney and C.E. Brion 194 (1995) 175
Differences in the binding of the primary quinone acceptor in Photosystem I and reaction centres of *Rhodobacter Sphaeroides*-R26 studied with transient EPR spectroscopy, A. van der Est, I. Sieckmann, W. Lubitz and D. Stehlik 194 (1995) 349
Time-resolved W-band (95 GHz) EPR spectroscopy of Zn-substituted reaction centers of *Rhodobacter sphaeroides* R-26, T.F. Prisner, A. van der Est, R. Bittl, W. Lubitz, D. Stehlik and K. Möbius 194 (1995) 361
Triplet–singlet difference spectra of *Rps. viridis* recorded with magneto-optical difference spectroscopy at 1.2–286 K. Temperature dependence of position and width of the long-wavelength absorption band, P. Gast, E.J. Lous and A.J. Hoff 194 (1995) 387

Intramolecular dynamics
A simple model for proton transfer, P.M. Kiefer, V.B.P. Leite and R.M. Whitnell 194 (1995) 33

-radiationless transitions
A simple model for proton transfer, P.M. Kiefer, V.B.P. Leite and R.M. Whitnell 194 (1995) 33
The application of the energy gap law to the S_1 energies and dynamics of carotenoids, V. Chynwat and H.A. Frank 194 (1995) 237

Luminescence spectra, yields and lifetimes
Solvent relaxation of oxazine-4 in 2-methyltetrahydrofuran, E. Görlach, H. Gygax, P. Lubini and U.P. Wild 194 (1995) 185

Coherence loss processes
Transient absorption changes of a degenerate dimer induced by exciton scattering; implications for Photosystem II of photosynthesis, J.P.M. Schelvis and T.J. Aartsma 194 (1995) 303

Multiphoton phenomena
Fluorescence-detected two-photon circular dichroism of Gd^{3+} in trigonal $Na_3[Gd(C_4H_4O_5)_3] \cdot 2NaClO_4 \cdot 6H_2O$, K.E. Gunde and F.S. Richardson 194 (1995) 195

Reactions (including dissociation)
Vibrational energy dependence of nonradiative decay rate: triplet benzene studied by time-resolved and steady-state photosensitized phosphorescence, Y. Ide and T. Hikida 194 (1995) 159

-gas phase
Vibrational energy dependence of nonradiative decay rate: triplet benzene studied by time-resolved and steady-state photosensitized phosphorescence, Y. Ide and T. Hikida 194 (1995) 159

-condensed phase
The thermal ageing of poly(3,4-ethylenedioxythiophene). An investigation by X-ray absorption and X-ray photoelectron spectroscopy, I. Winter, C. Reese, J. Hormes, G. Heywang and F. Jonas 194 (1995) 207

-photochemical
Differences in the binding of the primary quinone acceptor in Photosystem I and reaction centres of *Rhodobacter Sphaeroides*-R26 studied with transient EPR spectroscopy, A. van der Est, I. Sieckmann, W. Lubitz and D. Stehlik 194 (1995) 349

Tunnelling
Tunneling splittings in model 2D potentials. II. $V(X, Y) = \lambda(X^2 - X_0^2)^2 - CX^2(Y - Y_0) + \frac{1}{2}\Omega^2(Y - Y_0 + CX_0^2/\Omega^2)^2 - C^2X_0^4/2\Omega^2$, V.A. Benderskii, S.Yu. Grebenshchikov and G.V. Mil'nikov 194 (1995) 1
A simple model for proton transfer, P.M. Kiefer, V.B.P. Leite and R.M. Whitnell 194 (1995) 33

Electron transfer
Temperature dependent hole burning of the 684 nm chlorophyll *a* of the isolated reaction center of Photosystem II: confirmation of the linker model, H.-C. Chang, G.J. Small and R. Jankowiak 194 (1995) 323
EPR properties of the four hemes in the cytochrome subunit of reaction centres from *Rhodopseudomonas viridis*: characterization of the individual hemes, O. Kaminskaya, P.J. Bratt and M.C.W. Evans 194 (1995) 335
Differences in the binding of the primary quinone acceptor in Photosystem I and reaction centres of *Rhodobacter Sphaeroides*-R26 studied with transient EPR spectroscopy, A. van der Est, I. Sieckmann, W. Lubitz and D. Stehlik 194 (1995) 349

FTIR spectroscopy of the photoreduction of the bacteriopheophytin electron acceptor in reaction centers of *Rb. sphaeroides* and *Rps. viridis*, E. Nabedryk, S. Andrianambinintsoa, D. Dejonghe and J. Breton 194 (1995) 371

High-field EPR on the primary electron donor cation radical in single crystals of heterodimer mutant reaction centers of photosynthetic bacteria – first characterization of the *G*-tensor, M. Huber and J.T. Törring 194 (1995) 379

Primary processes in isolated Photosystem II reaction centres probed by magic angle transient absorption spectroscopy, D.R. Klug, T. Rech, D.M. Joseph, J. Barber, J.R. Durrant and G. Porter 194 (1995) 433

Ionization (including Rydberg states)

Double ionization of the propyne molecule to ground and electronically excited states of the doubly charged ion, S.R. Andrews, F.M. Harris and D.E. Parry 194 (1995) 215

Isotopic effects

FTIR spectroscopy of the photoreduction of the bacteriopheophytin electron acceptor in reaction centers of *Rb. sphaeroides* and *Rps. viridis*, E. Nabedryk, S. Andrianambinintsoa, D. Dejonghe and J. Breton 194 (1995) 371

Exchange of chloride by bromide in the manganese Photosystem-II complex studied by cw- and pulsed-EPR, A. Boussac 194 (1995) 409

Surface effects and catalysis

Molecular adsorption on ionic substrates: characterization of terrace and step sites, S. Briquez, A. Lakhlifi, S. Picaud and C. Girardet 194 (1995) 65

Energy transfer processes and surface corrugation: a combined collision dynamics and experimental study of the Xe–GaSe(001) system, S. Iannotta, C. Gravili, A. Boschetti, A. Cagol and M. Cacciatore 194 (1995) 133

Structure of solids and liquids

The thermal ageing of poly(3,4-ethylenedioxythiophene). An investigation by X-ray absorption and X-ray photoelectron spectroscopy, I. Winter, C. Reese, J. Hormes, G. Heywang and F. Jonas 194 (1995) 207

Phase transitions

Vibrational study of various crystalline phases of thallium dihydrogen arsenate TlH_2AsO_4. Comparison with thallium dihydrogen phosphate TlH_2PO_4, Z. Ouafik, N. Le Calvé and B. Pasquier 194 (1995) 145